

REMARKS

Claims 1-13 and 16 are pending. Claim 14-15 stand withdrawn.

Restriction Requirement

The Examiner argues that Claims 1 and 14 are not related to a single inventive concept because Plester discloses “a heat exchanger (18) which is fully capable of heating the treated water in the reservoir (26) to steam and allow[ing] it to flow in the reverse direction through the apparatus.” This assertion is incorrect.

Plester’s heat exchanger (18) cools – it does not heat – water passing from the treatment housing to the reservoir (26) with water being fed to the treatment housing from the water mains. Simultaneously while performing this cooling function, heat exchanger (18) also heats the water from the water mains that is fed to the treatment housing. Even if Plester’s heat exchanger (18) were somehow modified to heat, instead of cool, the water passing from the treatment housing to the reservoir (26) to a level that steam pressure is generated, the heat exchanger would still be incapable of performing the recited function. Specifically, the heat exchanger (18) cannot simultaneously heat water in reservoir (26) while allowing it to flow the reverse direction through the heat exchanger (18). In other words, the heat exchanger (18) cannot transmit heat one direction and steam in the other direction.

As such, Applicant respectfully submits that claims 1 and 14 are related to a single inventive concept and requests reconsideration of the restriction requirement.

Objection to the Specification

The Examiner objected to the specification for not containing a “Brief Description of the Several Views of the Drawings.” Applicant believes this objection is moot in view of the foregoing amendments to the specification.

Objection to the Claims

The Examiner objected to Claim 13 for containing a typographical error. Applicant has amended the claim to correct the cited informality.

Amendments to Claims

Claim 13 was amended to correct a typographical error.

Claim 16 was added. Support for claim 16 may be found in original Claims 1 and 14, and in the specification at page 2, line 23 to page 9, line 17.

No new matter is presented in any of the foregoing amendments.

Rejection under 35 U.S.C. § 103

Claims 1, 3-9, 10, 11 and 13 are rejected under 35 U.S.C. § 103(a) as obvious over WO 01/12559 to Plester (hereinafter “Plester”) in view of U.S. Patent No. 4,518,503 to Fermaglich (hereinafter “Fermaglich”). Claim 2 is rejected under 35 U.S.C. § 103(a) as obvious over Plester in view of Fermaglich further in view of U.S. Patent No. 7,089,763 to Forsberg et al. (hereinafter “Forsberg”). Claim 12 is rejected under 35 U.S.C. § 103(a) as obvious over Plester in view of Fermaglich further in view of U.S. Patent No. 5,647,977 to Arnaud (hereinafter “Arnaud”).

None of the cited references disclose a water treatment apparatus capable of self-sanitization. Although Plester and Fermaglich are each directed to a water treatment apparatus, neither reference teaches or discloses the functionality “whereby steam may be passed through the apparatus in the reverse direction to the water” (the water being specifically claimed to pass from the housing to the reservoir).

Plester discloses a water treatment apparatus which treats water in a housing (114) and transmits the treated water to a reservoir (121). The water is heated and filtered in housing (114) to treat the water before it is received in reservoir (121).

Fermaglich describes a multistage water treatment apparatus. As best illustrated in FIG. 2 of Fermaglich, the treatment may be summarized as follows:

(I) untreated water is fed to an activated carbon filter (12) under pressure and fills the leftmost container, a portion of the water passes into the middle container which includes a heater (50);

(II) the heater (50) is activated once a certain level is attained, and an equilibrium is established between the leftmost container and the middle container as heated water is allowed to flow between the two containers¹; and

(III) steam (62) produced in the headspace of the evaporator (middle container) passes through a condenser where it is collected in the rightmost container.

Fermaglich does not teach sanitization of the apparatus – only treatment of the water. Fermaglich also does not disclose feeding steam in the reverse direction to the water. The steam produced by the evaporator flows through the passage means (72) into the condenser (18).

¹ The heated water both increases the effectiveness of the carbon filter (12) and distills the filtered water.

Because the fluid connection (46) extends between the bottom of the evaporator (14) and the bottom of the container/housing (24), only heated, liquid water would be exchanged between the evaporator (14) and the housing (24).

The Examiner has failed to meet his burden to establish a *prima facie* case of obviousness, because (1) as set forth above, the cited references do not disclose all of the material limitations of the claims; and (2) neither sound technical arguments nor evidence has been provided to support the Examiner's conclusion of obviousness.

The Examiner Has Not Applied the Proper Legal Standard
to Reach a Conclusion of Obviousness.

A patent may not be proven obvious "merely by demonstrating that each of its elements was, independently, known in the prior art." *Teleflex, Inc. v. KSR Int'l Co.*, 550 U.S. ___, 127 S. Ct. 1727, 1741 (2007). Instead, it is necessary to identify some "apparent reason to combine the known elements." *Id.* at 1740. That reason should not merely be the result of the Examiner having read Applicant's specification. Here, the Examiner's combination of Plester and Fermaglich would only be obtainable using improper reliance on hindsight reconstruction which depends on "the inventor's disclosure as a blueprint for piecing together the prior art." *Iron Grip Barbell Co. v USA Sports, Inc.*, 392 F.3d 1317, 1320 (Fed. Cir. 2004). As detailed below, one of ordinary skill in the art would not, without using Applicants' specification as a blueprint, have been led to start the teaching of Plester, to seek Fermaglich, and then—when considering the prior art for all that it teaches—to combine and modify those teachings to derive Applicant's claimed invention.

In the present case, the Examiner has not offered anything more than conclusory statements to support the combination. The Examiner's rationale for combining Plester and Fermaglich is essentially that "it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Plester to include a heater located in the reservoir in order to create steam in the reservoir that produces a pressure to move the fluids from the reservoir back in to the housing and through the filter in order to enhance the purification of the water as exemplified by Fermaglich." Such a conclusory statement not only lacks reasoning or supporting evidence, but it is plainly incorrect.

Further, the Examiner fails to explain how such a combination system would be utilized. In particular, it is not clear how the purified water which has been subjected to the "enhanced purification" treatment would be obtained from the modified Plester apparatus. The treated water is normally obtained from the reservoir (121), but the Examiner has proposed that the water be converted to steam and circulated in the reverse direction (presumably to accumulate in the housing (114)). If so, Plester's device provides no mechanism to dispense the treated water from the housing (114). If, instead, the Examiner is proposing that the water:

- (i) be treated a first time in the housing (114) and collected in the reservoir (121); then
- (ii) be boiled in the reservoir (121) and reversed back to the housing (114); and then
- (iii) be treated yet again in housing (114) and collected in the reservoir (121) where it is

finally dispensed;

such a treatment scheme provides no apparent, non-redundant benefit to justify its cost.

Furthermore, such a treatment scheme is not analogous to the treatment scheme employed by Fermaglich using Fermaglich's evaporator (14). Fermaglich teaches using steam pressure in the

headspace of the evaporator (14) to transfer liquid water and latent heat to another container where the heat distills the water, causing components more volatile than the water to vent to the atmosphere.

“Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed.Cir. 2006). Applicant respectfully submits the foregoing justification lacks any articulated reasoning and is nothing more than “mere conclusory statements.” Nevertheless, there are many reasons why one skilled in the art would not be motivated to combine the devices of Plester and Fermaglich.

One of Ordinary Skill Would Not Have Been Motivated to Derive Applicants’
Claimed Apparatus by Combining Plester with Fermaglich.

Even though a *prima facie* case of obviousness has not been established, Applicant nevertheless submits that one of ordinary skill would not have been motivated to derive Applicants’ claimed apparatus by combining Plester with Fermaglich. First, the combination, as described by the Examiner, would be redundant. The treated water in the reservoir (121) of Plester has already been *distilled and filtered* in the housing (114) by the filter and internal heater contained therein. There is no clear benefit or reason to circulate the water in the reverse direction. Furthermore, the combination seemingly destroys the intended function of Plester’s heat exchanger (18). It is not clear why the water would be cooled by heat exchanger (18) if it were to be reboiled in the reservoir (121).

Applicant respectfully submits that the only conceivable reason to circulate steam in a reverse direction to the water in Plester’s apparatus would be for the purpose of sanitizing the

apparatus – not adding a duplicative water treatment stage. Such a modification would not be made without hindsight bias.

Based on the foregoing, Applicant submits that the claims are in condition for allowance. If there are any issues which can be resolved by a telephone conference or an examiner's amendment, the examiner is invited to call the undersigned attorney at 404.853.8066.

Respectfully submitted



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